

## NOTES ON NORTH AMERICAN TINGIDÆ (HEM.-HET.).

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*Corythucha immaculata* Osborn and Drake. I have numerous specimens of this insect from California, Oregon, Washington, Idaho and Montana. The Montana specimens were taken on balsam-root, *Balsamorhiza saggitata* (Pursh) Nutt., by Prof. Cooley, May 16, 1918, also at various times during the summer of 1917. The species is slightly variable in size and *C. pura* Gibson does not seem to be distinct from it.

*Galeatus peckhami* Ashmead. One specimen of this peculiar insect was taken at Rock City, Cattaraugus County, N. Y., by Dr. H. H. Knight.

## Genus CALOTINGIS n. gen.

Bucculæ narrow, not contiguous in front. Antennæ long, slender, the first segment a little thicker and longer than the second, the third segment very long, cylindrical, slenderest, the fourth segment fusiform. Antenniferous tubercles slender and short, a rather broad, short, lace-like structure projecting beneath the eyes. Rostral groove uninterrupted, greatly widened on the metasternum, closed at the apex by a narrow, nearly transverse ridge, a continuation of the lateral laminæ. Pronotum tricarinate; hood rather large, narrow, rounded above, extending to the apex of the head, but not covering the eyes; paranota very large, erect, forming large bulbiform processes somewhat like in the genus *Dichocysta* Champ., but not closed within by the lateral carinæ. Metasternal orifices distinct. Head with five slender spines beneath the hood, the spines arranged as in related genera. Elytra extending to far beyond the apex of the abdomen, rounded at the apices. Discoidal area not extending to the middle of the elytra, the margins raised; costal and subcostal areas rather broad. Wings present.

This remarkable American insect belongs to the group of Tingidæ that are distinctly lacy, as in *Corythucha* Stål, *Leptostyla* Stål, etc., and the areolæ are mostly hyaline. In the formation of the paranota the genus somewhat resembles the genus *Dichocysta* Champ., but readily separated from it by the hood, open bucculæ in front, slender antennæ, delicate lacy structures, etc.

*Type* of genus *C. knighti* sp. nov.

**Calotingis knighti** n. sp.

Antennæ long, slender; first segment about twice the length of the second; third segment very long, slender; fourth segment slightly swollen, fusiform. Head with the tips of anterior spines projecting out beneath the hood. Rostral laminae greatly widened on the metasternum, the rostrum extending slightly beyond the meso-metasternal suture. Hood highly elevated, narrow, the sides nearly flat, rounded dorsally. Pronotum distinctly tricarinate; median carina moderately elevated, uniseriate, the areolæ hyaline; lateral carinae much less elevated, rather widely separated from the hood; paranota slightly higher than the hood, the anterior and posterior margins strongly turned in and leaving an opening at the middle, the anterior margin touching the hood and the posterior margin extending over the lateral carina; apex of triangular process reticulate. Legs rather slender. Elytra with the outer margins rounded, costal area biseriate to beyond the middle and with a few extra areolæ for a short distance towards the apex, the areolæ quite large; subcostal area mostly triseriate, the areolæ small. Claspers strongly curved in the male. Wings longer than the abdomen. Length, 2.45 mm.; width, 1.2 mm.

*Color*.—General color yellowish white; body beneath black. Distal segment of antennæ and tarsi black. Hood and paranota mostly light fuscous, the disc of pronotum blackish. Elytra with the areolæ hyaline, a brown or light fuscous spot at the base of the discoidal area.

One male and three females, taken on *Malva viscus Drummondii* T., at Helotes, Texas, July 1, 1917, by Dr. H. H. Knight. The insect is not very closely allied to any American tingid.

**Leptopypha minor** McAtee. This insect was described from two specimens taken in Siskiyou County, California. Numerous specimens are at hand from Huachuca Mts., Arizona, collected by Prof. H. G. Barber, July 15.

**Leptopypha costata** Parshley. Parshley, Heidemann and McAtee list this species from Maryland, Washington (D. C.) and Virginia. Numerous specimens are at hand from the above localities, also from Colorado, Arkansas and Illinois.

**Leptopypha elliptica** McAtee. Numerous specimens are before me from Victoria, Texas, and Stone Mt., Georgia, and one specimen from Jacksonville, Florida. The Texas specimens bear the food plant label "swamp bush" and Dr. Knight collected the Georgia specimens on *Ilex* sp.

**Leptopypha mutica** Say. McAtee gives the distribution of this common species as Indiana, Ohio, Nebraska, Wisconsin, Ontario, New Jersey, Tennessee, Texas, and states as follows: ". . . very

common in the vicinity of Washington, D. C., on fringe-tree (*Chionanthus virginica* L.) and on various species of ash (*Fraxinus*)." To these localities I can add Michigan, Illinois, Maryland, Virginia, Georgia and Florida. My Texas specimens bear the food plant label "*Adelia acuminata*." Heidemann collected a long series of specimens "at light" at Forest Glen, Md., June 6, 1914.

**Dichocysta pictipes** Champion. A single specimen of this species was taken by the author while sweeping shrubs in a hammock on the University of Florida Campus at Gainesville, Fla., June 14, 1918. It has been collected in Arizona by Prof. Barber.

#### **Hesperotingis illinoiensis** n. sp.

Head with long stout spines; median spine suberect; lateral spines porrect or approximating at their tips; dorsal spine very long, contiguous with surface of the head. Antennæ stout, reaching beyond the base of the elytra, slightly pubescent, the basal segment thicker and longer than the second; third segment long, very large, clavate, much longer than in *antennata* Parsh.; fourth segment nearly elliptical, longer than the first and shorter than the first and second segments taken together. Pronotum coarsely punctate, tricarinate, the carinæ moderately raised, rather thick, uniseriate; paranota uniseriate, nearly vertical. Bucculæ broad, reticulate. Rostrum extending to the intermediate coxæ, the rostral groove widened posteriorly. Legs moderately stout. Elytra extending considerably beyond the apex of the abdomen, broadly rounded at the apices; costal area broad, biseriate to beyond the middle and triseriate for a short distance towards the apex, the areolæ moderately large and somewhat regularly arranged; subcostal area almost entirely biseriate; discoidal area broad, extending beyond the middle of the elytra, the outer margin curved. Length, 4.1-4.6 mm.; width, 2 mm.

*Color*.—General color above uniform yellowish brown, slightly darkened in the type. Body beneath, legs and antennæ brown, the tarsi and the distal half of third and fourth antennal segments blackish.

Three specimens taken at Palos Park, Ill., July 16, 1908, by Mr. W. J. Gerhard. In one specimen the costal area on one side is entirely biseriate and on the other sides as described above. The type has the wings a little longer, about .5 mm., than the other two specimens and is a little darker in color. The broad costal area readily separates this insect from either *antennata* Parshley or *fuscata* Parshley.

*Type* in Cornell University collection; *paratype* in the author's collection, Syracuse, N. Y.